

Cosmological evolution of plasma with scalar interparticle interaction. I. Canonical formulation of classical scalar interaction

Ignat'ev Y.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Dynamic equations of scalar charged particle motion in a classical scalar field are formulated based on the Hamilton formalism, and a model with zero particle mass is considered. Linear integrals of motion are derived, and ambiguity of the relationship between the kinematic particle velocity and momentum is indicated. © 2012 Springer Science+Business Media, Inc.

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